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EXAMINER

MOUZON, LAJUANIA N

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Applicant's Amendment filed 3/11/2008. Claims 1-12, 14-28, and 30-42 are pending. Claims 13, 29, and 43 are canceled.

Specification

2. Applicant's amendments to the specification filed on 3/11/2008, have been fully considered and are persuasive. The objections to the specification have been withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-4, 6-12, 14-20, 22-23, 26-28, 30-37, 40, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joffe et al. (US 6,185,619) in view of Still et al. (US 6,718,390).

6. In regards to claim 1 Joffe et al. discloses, a process implemented across a network for providing a link to a preferred network server corresponding to a preferred mirror instance within a plurality of network servers corresponding to a plurality of mirror instances of a content store, comprising the steps of:

a. providing a server application (**Fig. 4A #360**) at a first web server (**Fig. 4A #212**), and a client application at a client terminal (**Fig. 4A World Wide Web Browser residing on a client terminal.**),

i. the first web server (**Fig. 4A #212**) comprising a server other than a server corresponding to the content store (**Fig. 4A #232 (another server), #368 (content store) and Col. 10 line(s) 4-9**) and the network servers (**Fig. 4A #250**) corresponding to the mirror instances (**Fig. 4A #232**),

ii. wherein the client terminal is connected to the first web server by a first connection (**Fig. 4A #410**), wherein the client terminal is connected to the network through the first web server (**Fig. 4A #412**), and wherein the server application and the client application are integrated to provide localization decisions invisibly to a user, and to provide links to localized content from the server application to the client application (**Col. 13 line(s) 10-12 and 37-41, teach the front end software component (server**

application #360) and the client application (WWW Browser) working together (integrated) invisibly to the user, by the server application receiving a request from the client, to decide the best content server to direct the client to (providing localization decision). Then providing a link to the WWW Browser via the front end software component of the best content server.);

b. determining localization information for each mirrored instance of the content store, wherein the localization information comprises the number of hops and latency from each mirrored instance of the content store to any of the first web server and the client terminal **(Col. 11 line(s) 43-55 and Col. 12 line(s) 20-23, teach the director making decisions about which content server is best for each request by a client using localization information, including the ICMP echo response times (latency) and currently open TCP connections (# of hops) from each content server (mirror instance) to the web server and client.);**

c. storing the determined localization information in a localization database **(Col. 12 line(s) 16-19 and Col. 15 line(s) 30-48, teach the localization information being stored and retrieved from the stored location based on a request. Therefore it is inherent that the stored location is a database.);**

d. sending a request to the first web server over the first connection from a user at the client terminal **(Fig. 4A #410 and Col. 13 line(s) 1-2.), the request**

comprising a link to mirrored content (**Col. 13 line(s) 10-12, teach the request having a link to mirrored content.);**

e. querying the localization database and applying a set of rules to the stored localization information through the server application at the first web server to determine a preferred mirror instance for the client terminal, the rules comprising a function of the stored hop information and the stored latency information between each of the mirror instances and the client terminal (**Fig. 5A and 5B, Col. 11 line(s) 43-52, Col. 14 line(s) 64-67 – Col. 15 line(s) 1-2, teach the director receiving a query request from the front-end component (server application), at the web server (front end server #212). Then applying a statistical algorithm (set of rules) to determine the “best” server (mirror instance), wherein the rules are a function of the stored hop and latency information between each of the mirror instances and the client terminal.);**

f. dynamically generating a localized link to the determined preferred mirror instance through the server application at the first web server (**Col. 13 line(s) 34-39, teach dynamically generating a localized link to the determined preferred mirror instance through the server application at the selected web server.);** and

g. transmitting the localized link from the first web server to the client terminal (**Col. 13 line(s) 37-41, teach sending the localized link from the web server to the client.);**

7. Joffe et al. do not teach dynamically generating a web page that includes a selectable link and transmitting the generated web page.
8. In the same field of endeavor Still et al. teach a client sending a request (**Col. 4 line(s) 31-35**), for a web page, the server processing the request and generating a HTML page (web page) (**Col. 4 line(s) 46-49**) with hyperlinks (**Col. 4 line(s) 53-56**), then sending the generated web page with hyperlinks to the client (**Col. 4 line(s) 58-63**).
9. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Joffe et al. method and apparatus for balancing the process load on network servers according to network and server based policies with Still et al. teaching as discussed above to allow for the capability of giving the user the option to be linked to, requested or other, resources hosted by the closest server with the content.
10. In regards to claims 2, 18, and 32 Joffe et al. do not teach, automatically directing the user to the local mirror instance when the user selects the selectable localized link within the dynamically generated web page.
11. In the same field of endeavor Still et al. teach a client sending a request (**Col. 4 line(s) 31-35**), for a web page, the server processing the request and generating a HTML page (web page) (**Col. 4 line(s) 46-49**) with hyperlinks (**Col. 4 line(s) 53-56**), then sending the generated web page with hyperlinks to the client (**Col. 4 line(s) 58-63**). Wherein when the client (user) receives the web page, when they click on the

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hyperlinks they are automatically directed to the correct server (local mirror instance)

(Col. 4 line(s) 64-67).

12. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Joffe et al. method and apparatus for balancing the process load on network servers according to network and server based policies with Still et al. teaching as discussed above to allow for the capability of giving the user the option to be linked to, requested or other, resources hosted by the closest server with the content.

13. In regards to claims 3, 19, and 33 Joffe et al. discloses, wherein the function of the stored hop information and the stored latency information between each of the mirror instances and the client terminal comprises a determination of a mirror instance having the lowest number of hops **(Col. 11 line(s) 45-50 and Col. 12 line(s) 20-23, teach the director using the number of hops to decide which content server (mirror instance) is the best one.)**.

14. In regards to claims 4, 20, and 34 Joffe et al. discloses, wherein the function of the stored hop information and the stored latency information between each of the mirror instances and the client terminal comprises a determination of one or more mirror instances having the lowest number of hops, and in the case of a tie, the preferred mirror instance additionally comprises the lowest latency **(Col. 14 line(s) 55-63, teach that the mirror instance is chosen base on the number of hops and if there is a tie then the one with the lowest latency wins.)**.

15. In regards to claims 6, 22, and 36 Joffe et al. discloses, where in the localization information further comprises mirror server load information **(Col. 12 line(s) 16-23, teach the localization information including the content server (mirror instance) load.)**.

16. In regards to claims 7, 23, and 37 Joffe et al. discloses, wherein the localization information further comprises mirror server operation information **(Col. 11 line(s) 46-47 and Col. 12 line(s) 16-23, teach the localization information including the replicated server status and other operation information (mirror instance operation information).)**.

17. In regards to claims 10 and 26 Joffe et al. discloses, wherein the first web server is associated with a service provider **(Col. 11 line(s) 27-40, teach the front end server (web server) being associated with a service provider.)**.

18. In regards to claims 11 and 27 Joffe et al. discloses the localization information is stored at the first web server **(Fig. 4B #212 and Col. 11 line(s) 43-55, teach the director using the stored localization information on the front end server (web server).)**.

19. In regards to claims 12, 28, and 42 Joffe et al. discloses, wherein the request comprises a web page **(Col. 13 line(s) 1-2, teach the request being a HTTP request from a web browser, i.e. a web page.)**.

20. In regards to claim 14 Joffe et al. discloses, wherein the preferred mirror is further determined from the request IP address of the client terminal **(Col. 11 line(s) 43-**

46, teach that the request IP address of the client terminal is taken into consideration when determining the best content server (preferred mirror).).

21. In regards to claims 15 and 30 Joffe et al. discloses, wherein the preferred mirror is further determined from the request IP network of the user **(Col. 11 line(s) 45-47, teach the preferred mirror (content server) being determined from the request IP network of the user.)**.

22. In regards to claim 16 Joffe et al. do not teach wherein the selectable localized link comprises an HTTP link.

23. In the same field of endeavor Still et al. teach a client sending a request **(Col. 4 line(s) 31-35)**, for a web page, the server processing the request and generating a HTML page (web page) **(Col. 4 line(s) 46-49)** with hyperlinks **(Col. 4 line(s) 53-56)**, then sending the generated web page with hyperlinks to the client **(Col. 4 line(s) 58-63)**.

24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Joffe et al. method and apparatus for balancing the process load on network servers according to network and server based policies with Still et al. teaching as discussed above to allow for the capability of giving the user the option to be linked to, requested or other, resources hosted by the closest server with the content.

25. In regards to claim 17 Joffe et al. discloses, a process implemented across a network for providing a link to a preferred network server corresponding to a preferred

mirror instance within a plurality of network servers corresponding to a plurality of mirror instances of a content store, comprising the steps of:

- h. providing a server application (**Fig. 4A #360**) at a first web server (**Fig. 4A #212**), and a client application at a client terminal (**Fig. 4A World Wide Web Browser residing on a client terminal.**),
 - iii. the first web server (**Fig. 4A #212**) comprising a server other than a server corresponding to the content store (**Fig. 4A #232 (another server), #368 (content store) and Col. 10 line(s) 4-9**) and the network servers (**Fig. 4A #250**) corresponding to the mirror instances (**Fig. 4A #232**),
 - iv. wherein the client terminal is connected to the first web server by a first connection (**Fig. 4A #410**), wherein the client terminal is connected to the network through the first web server (**Fig. 4A #412**), and wherein the server application and the client application are integrated to provide localization decisions invisibly to a user, and to provide links to localized content from the server application to the client application (**Col. 13 line(s) 10-12 and 37-41, teach the front end software component (server application #360) and the client application (WWW Browser) working together (integrated) invisibly to the user, by the server application receiving a request from the client, to decide the best content server to direct the client to (providing localization decision). Then**

providing a link to the WWW Browser via the front end software component of the best content server.);

- i. determining localization information for each mirrored instance of the content store, wherein the localization information comprises the number of hops and latency from each mirrored instance of the content store to any of the first web server and the client terminal **(Col. 11 line(s) 43-55 and Col. 12 line(s) 20-23, teach the director making decisions about which content server is best for each request by a client using localization information, including the ICMP echo response times (latency) and currently open TCP connections (# of hops) from each content server (mirror instance) to the web server and client.);**
- j. storing the determined localization information in a localization database **(Col. 12 line(s) 16-19 and Col. 15 line(s) 30-48, teach the localization information being stored and retrieved from the stored location based on a request. Therefore it is inherent that the stored location is a database.);**
- k. sending a request to the first web server over the first connection from a user at the client terminal **(Fig. 4A #410 and Col. 13 line(s) 1-2.), the request comprising a link to mirrored content (Col. 13 line(s) 10-12, teach the request having a link to mirrored content.);**
- l. querying the localization database and applying a set of rules to the stored localization information through the server application at the first web server to

determine a preferred mirror instance for the client terminal, the rules comprising a function of the stored hop information and the stored latency information between each of the mirror instances and the client terminal (**Fig. 5A and 5B, Col. 11 line(s) 43-52, Col. 14 line(s) 64-67 – Col. 15 line(s) 1-2, teach the director receiving a query request from the front-end component (server application), at the web server (front end server #212). Then applying a statistical algorithm (set of rules) to determine the “best” server (mirror instance), wherein the rules are a function of the stored hop and latency information between each of the mirror instances and the client terminal.);**

m. dynamically generating a localized link to the determined preferred mirror instance through the server application at the first web server (**Col. 13 line(s) 34-39, teach dynamically generating a localized link to the determined preferred mirror instance through the server application at the selected web server.);** and

n. transmitting the localized link from the first web server to the client terminal (**Col. 13 line(s) 37-41, teach sending the localized link from the web server to the client.);**

26. Joffe et al. do not teach dynamically generating a web page that includes a selectable link and transmitting the generated web page.

27. In the same field of endeavor Still et al. teach a client sending a request (**Col. 4 line(s) 31-35**), for a web page, the server processing the request and generating a

HTML page (web page) **(Col. 4 line(s) 46-49)** with hyperlinks **(Col. 4 line(s) 53-56)**, then sending the generated web page with hyperlinks to the client **(Col. 4 line(s) 58-63)**.

28. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Joffe et al. method and apparatus for balancing the process load on network servers according to network and server based policies with Still et al. teaching as discussed above to allow for the capability of giving the user the option to be linked to, requested or other, resources hosted by the closest server with the content.

29. In regards to claim 31 Joffe et al. discloses, a proximity resource allocation system implemented across a network for providing a link to a preferred network server within a plurality of network servers corresponding to a plurality of mirror instances of a content store from which a user terminal having a unique address is connectable to the preferred network server, comprising:

- o. providing a server application **(Fig. 4A #360)** at a first web server **(Fig. 4A #212)**, and a client application at a client terminal **(Fig. 4A World Wide Web Browser residing on a client terminal.)**,
- v. the first web server **(Fig. 4A #212)** comprising a server other than a server corresponding to the content store **(Fig. 4A #232 (another server), #368 (content store) and Col. 10 line(s) 4-9)** and the network servers **(Fig. 4A #250)** corresponding to the mirror instances **(Fig. 4A #232)**,

- vi. wherein the client terminal is connected to the first web server by a first connection (**Fig. 4A #410**), wherein the client terminal is connected to the network through the first web server (**Fig. 4A #412**), and wherein the server application and the client application are integrated to provide localization decisions invisibly to a user, and to provide links to localized content from the server application to the client application (**Col. 13 line(s) 10-12 and 37-41, teach the front end software component (server application #360) and the client application (WWW Browser) working together (integrated) invisibly to the user, by the server application receiving a request from the client, to decide the best content server to direct the client to (providing localization decision). Then providing a link to the WWW Browser via the front end software component of the best content server.**);
- p. a localization database comprising storage of localization information for each mirror of the content store (**Col. 12 line(s) 16-19 and Col. 15 line(s) 30-48, teach the localization information being stored and retrieved from the stored location based on a request. Therefore it is inherent that the stored location is a database.**), wherein the localization information comprises the number of hops and latency from each of the plurality mirrors to any of the first web server and the user terminal (**Col. 16 line(s) 57-64, teach the director retrieving information that was stored by the Load Manager and Ping Manager. This information including the ICMP echo response time (latency)**

and currently open TCP connections (# of hops) as explained in Col. 11.

line(s) 66-67 - Col. 12 line(s) 1-7 and 16-23);

q. the server application for receiving a request sent to the first web server over the first connection from the user terminal (**Fig. 4A #410 and Col. 13 line(s) 10-11.**), the request comprising a link to the content store (**Col. 13 line(s) 10-12, teach the request having a link to mirrored content.**), for

vii. querying the localization database and applying a set of rules to the stored localization information through the server application at the first web server to determine a preferred mirror for the user terminal, wherein the determination is invisible to the user terminal, the rules comprising, a function of the stored hop information and the stored latency information between each of the mirrors and the unique address (**Fig. 5A and 5B, Col. 11 line(s) 43-52, Col. 14 line(s) 64-67 – Col. 15 line(s) 1-2, teach the director receiving a query request from the front-end component (server application), at the web server (front end server #212). Then applying a statistical algorithm (set of rules) to determine the “best” server (mirror instance), wherein the rules are a function of the stored hop and latency information between each of the mirror instances and the client terminal.**), for

viii. dynamically generating a localized link to the determined preferred mirror through the server application at the first web server (**Col. 13**

line(s) 34-39, teach dynamically generating a localized link to the determined preferred mirror instance through the server application at the selected web server.), and for

ix. transmitting the localized link from the first web server to the user terminal **(Col. 13 line(s) 37-41, teach sending the localized link from the web server to the client.)**.

30. Joffe et al. do not teach dynamically generating a web page that includes a selectable link and transmitting the generated web page.

31. In the same field of endeavor Still et al. teach a client sending a request **(Col. 4 line(s) 31-35)**, for a web page, the server processing the request and generating a HTML page (web page) **(Col. 4 line(s) 46-49)** with hyperlinks **(Col. 4 line(s) 53-56)**, then sending the generated web page with hyperlinks to the client **(Col. 4 line(s) 58-63)**.

32. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Joffe et al. method and apparatus for balancing the process load on network servers according to network and server based policies with Still et al. teaching as discussed above to allow for the capability of giving the user the option to be linked to, requested or other, resources hosted by the closest server with the content.

33. In regards to claim 35 Joffe et al. discloses, wherein the unique address comprises a terminal IP address (**Col. 11 line(s) 45-46, teach the client terminal having a unique IP address.**).

34. In regards to claim 40 Joffe et al. discloses wherein the localization information comprises a map of all IP address space within a global routing table (**Col. 10 line(s) 65-67 – Col. 11 line(s) 1-4 and Col. 16 line(s) 62-64, teach the localization information in a global routing table mapping all of the IP address spaces.**).

35. Claims 5, 8, 21, 24, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joffe et al. (US 6,185,619), in view of Still et al. (US 6,718,390) as applied to claims 1, 17, and 31 above, and further in view of Farber et al (US 6,185,598).

36. In regards to claims 5 and 21 neither Joffe et al. nor Still et al. teach wherein the localization information further comprises a transmission cost for each mirrored instance of the content store to each network from which users connect.

37. In the same field of endeavor Farber et al. teach receiving a request from a client and locating the closest mirror instance (repeater) using localization information. The information including transmission cost for each mirrored instance of the content store to each network from which users connect (**Col. 11 line(s) 28-37 and Col. 13 line(s) 1-6 and 56-62**).

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38. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Joffe et al. method and apparatus for balancing the process load on network servers according to network and server based policies and Still et al. selectively forced redirection of network traffic with Farber et al. teaching as discussed above to allow for the capability of transmitting the requested information the most cost efficient way, between the client and content server (mirror server/reflector).

39. In regards to claims 8, 24, and 38 neither Joffe et al. nor Still et al. teach wherein the localization information further comprises cost information.

40. In the same field of endeavor Farber et al. teach receiving a request from a client and locating the closest mirror instance (repeater) using localization information. The information including cost information for each mirrored instance of the content store to each network from which users connect (**Col. 11 line(s) 18-22 and 28-37 and Col. 13 line(s) 1-6 and 56-62**).

41. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Joffe et al. method and apparatus for balancing the process load on network servers according to network and server based policies and Still et al. selectively forced redirection of network traffic with Farber et al. teaching as discussed above to allow for the capability of transmitting the requested information

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the most cost efficient way, between the client and content server (mirror server/reflector).

42. Claims 9, 25, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joffe et al. (US 6,185,619), in view of Still et al. (US 6,718,390) as applied to claims 1, 17, and 31 above, and further in view of Swilden et al. (PGPub 2002/0052942).

43. In regards to claims 9, 25, and 39 neither Joffe et al. nor teach wherein the localization information further comprises network segment information.

44. In the same field of endeavor Swildens et al. teach receiving a request from a client and determining the closest mirror site to direct it to using localization information. The localization information including network health (network segment) information **(¶0040)**.

45. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Joffe et al. method and apparatus for balancing the process load on network servers according to network and server based policies and Still et al. selectively forced redirection of network traffic with Swildens et al. teaching as discussed above to allow for the capability of determining the optimal customer origin site.

46. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Joffe et al. (US 6,185,619), in view of Still et al. (US 6,718,390) as applied to claim 31 above, and further in view of Lyer et al. (US 7,058,706).

47. In regards to claim 41 Joffe et al. discloses wherein the localization information further comprises performance tests of the networks (**Col. 11 line(s) 57-67 - Col. 12 line(s) 1-23, teach the localization information including performance tests of the networks.**).

48. Neither Joffe et al. nor Still et al. teach wherein the localization information further comprises triangulation tests and performance tests of the networks.

49. In the same field of endeavor Lyer et al. teach directing a client to the closet server using latency and # of hops (localization information). Likewise Lyer et al. teach using traceroute as triangulation to include the results in a table of localization information (**Col. 3 line(s) 61-67**).

50. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Joffe et al. method and apparatus for balancing the process load on network servers according to network and server based policies and Still et al. selectively forced redirection of network traffic with Lyer et al. teaching as

discussed above to allow for the capability of gathering information for directing to the server that is “closest” to the client, based on the localization information collected.

Response to Arguments

51. Applicant's arguments with respect to claims 1-12, 14-28, and 30-42 have been considered but are moot in view of the new ground(s) of rejection.

52. Applicant's arguments, see pg. 2, filed 3/11/2008, with respect to 112 1st rejection have been fully considered and are persuasive. The rejection of claims 1, 10, 17, 26, 27, and 31 has been withdrawn.

53. Applicant's arguments, see pg. 3, filed 3/11/2008, with respect to claim objections have been fully considered and are persuasive. The objection of claims 1, 17, and 31 has been withdrawn.

Conclusion

54. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to La Juania N. Mouzon whose telephone number is 571-270-3045. The examiner can normally be reached on Monday - Friday 8:00-5:00, 1st Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Glenton B. Burgess/

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Supervisory Patent Examiner, Art Unit 2153

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